

**3.3.6. Believing a tool, such as 5S implementation, can be completed in a day or even week**

One can seldom complete the "Set in Order" step of a 5S project in a week. Two or three rounds of review are normally required to be sure excess material, tools and equipment are properly positioned. A process checklist with defined steps is the best way to ensure sustainability and accountability.

**3.3.7. Treating symptoms and not determining root cause**

Unfortunately, some problems get fixed only to reoccur. Lean tools such as the "5 Why" analysis are specifically designed to guide a team to define the root cause. While these methods take more time and discipline, solving a reoccurring problem normally saves a lot of time and cost.

**3.3.8. Believing you will achieve a lean transformation only by applying lean tools**

While all of the lean tools can help solve problems and reduce costs, creating a lean culture is the endgame.

**3.3.9. Lack of top management understanding and commitment**

No program will ever survive leadership apathy. Lean needs to be understood and promoted by top management. Employees are inspired to improve by leadership "walking the talk" and expecting to see management embracing change and pursuing perfection.

**3.3.10. Making the statement and believing "we have completed a lean program"**

It is called "continuous improvement" because the journey is never complete. When you stop improving, there is always another entity willing to further innovate and claim your business market share.

## **4. Lean and Site Management Principles**

Many people ask about the difference between quality ISO standards and lean implementation. The best way to communicate the difference is to recognize that there is not a difference. Quality by itself is an overarching umbrella that uses various methods to improve standards and improve operations. Lean is the agent that bonds us to our ISO requirements and maximizes the value of our product to our customers. Top organizations may be ISO compliant, with rigorous quality manuals and procedures, but lack innovation, culture, and continuous improvement.

Lean innovation takes a good quality program to the next level of operational excellence. In order to achieve this level of operational excellence, a company must have the basic quality programs in place. The quality program will provide an essential foundation and further establish a corporate culture of structure and continuous improvement. Companies that view the certification as the end objective (check the box) will not be as successful as companies that implement a lean program to accompany their quality program. A lean program will further enhance a company's quality program and improve the day-to-day operations. Reducing safety incidents, improving product reliability, and improving customer satisfaction takes continuous improvement. The lean tools will only help facilitate these improvements.

### **4.1. Metric Development and KPI Management**

#### **4.1.1. Key performance indicators (KPI) are set by management.**

- Goals and objectives are identified through management and customer expectations.
- Quality expectations, or customer requirements, are translated by management.

#### **4.1.2. Metrics are reflective of control point data.**

Metrics are the data points that reflect process or product performance. These metric points are identified by the quality plan to support the KPIs.

## **4.2. Accountability and Ownership**

### **4.2.1 Quality Plans: Proactive versus Reactive**

Quality planning should be performed in conjunction with other planning processes. To plan for quality, the team identifies the quality requirements and standards for the deliverables and documents how the project will demonstrate compliance.

The items to review to assist in the identification of quality requirements include, but are not limited to, the following:

- Project charter or scope statement describing the deliverables and acceptance criteria
- Work breakdown structure (WBS) identifying each deliverable
- Cost or budget outlining constraints to providing the deliverables
- Schedule highlighting the timeframe to deliver the project
- Risk register identifying information and threats to successful project completion
- Outside factors, including regulations or operating conditions, impacting the project
- Organizational process assets, including quality policies, supplier management programs, and lessons learned, assisting the project

As part of identifying the quality requirements, the team is to be aware of the benefits of meeting quality requirements, including less rework, higher productivity, lower costs, and increased stakeholder satisfaction. The tradeoff to delivering a quality project is the “cost of quality”, including the costs incurred in preventing non-conformance to requirements, inspecting the deliverables for conformance, and reworking a deliverable to meet requirements.

### **4.2.2. Quality Assurance (QA) and Quality Control (QC)**

QA can be defined as a set of activities designed to ensure that processes are established ensuring the project deliverables comply with relevant quality standards throughout the project lifecycle, including project audits and process checklists. QA is also the process of auditing or assessing the quality requirements and processes during the production of the deliverables to ensure the appropriate quality standards and operational definitions are used.